

ESTABLISHED 1848

RURAL
WORLD

COLMAN'S RURAL WORLD

DEVOTED TO AGRICULTURE HORTICULTURE HORSES CATTLE SHEEP SWINE ETC.

Established 1848.

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COLMAN'S RURAL WORLD.

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LEVI CROWDER,
EDITORS.

Published every Wednesday, in Chemical building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Chalmers D. Colman, 200 Temple Court, New York City. Advertisers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemical Building, St. Louis, Mo.

Subscribers must bear in mind that the subscription price of the RURAL WORLD is one dollar a year, and that we do not receive single subscriptions for a less sum, but in our constant effort to enlarge our circulation, we do allow old subscribers to take actually NEW subscribers at the fifty-cent rate, adding a new name with their own for one dollar, and other new names at fifty cents each, but in no case do we accept two OLD subscribers for one dollar. We are willing to make a loss on a new subscriber the first year, believing he will find the RURAL WORLD indispensable ever after. We also send the RURAL WORLD in conjunction with either the twice-a-week St. Louis "Republic" or the twice-a-week "Globe-Democrat" for one dollar and fifty cents a year, and new subscribers may be added at the fifty-cent rate. Published at this remarkably low price—less than actual cost—all subscribers must see the necessity of our dropping from our subscription list every name as soon as the year paid for expires. Thus if, on the printed slip on each paper you see John Jones Feb. '02, it indicates that the name will drop from the list at the end of February, and if he wishes to continue to receive it, he must renew his subscription. If he would do it a week or two in advance, it would save us the trouble of taking his name off the list and again putting it in type, when he renewed, which frequently causes mistakes. This is the season to push the good work of getting new subscribers. Show your neighbors a copy of the RURAL WORLD, call their attention to the large amount of fresh, original, entertaining and instructive reading matter contained in each issue; tell them of our large number of intelligent correspondents, and how highly you appreciate its weekly visits and of the low cost at which it can be received. If our readers will spend but a portion of one or two days in enlisting in this work they can easily add more than fifty thousand names within the next 60 days. Who will engage in this work? Will not each reader, male and female, young and old, go into the field at once and see how much he can do to help not only the farmer, but the cause of progressive agriculture?

"One swallow does not make a spring, neither does one failure spell defeat in anything," says A. N. Keller of Marion County, Arkansas, in telling of his fall-sown barley. The words are those of wisdom and courage. Mr. Keller also says: "Nature is kind to us if we will only reach our length for her favors." This thought was expressed to the writer by one of the most profound students of agriculture it has been our lot to meet, and he added this sentiment, "If we do not give respectful heed to nature and her laws in our farming operations she will resent the neglect and kick us down hill into poverty gulch."

Governor Ferguson of Oklahoma, it is reported, is favorably impressed by the suggestion of the Oklahoma Agricultural Society that a part of the \$30,000 St. Louis World's Fair fund be used in employing a proper person in each county to collect and forward the agricultural exhibits. And in this connection we suggest further that if the World's Fair is to be held in 1906, as the authorities insist will be done, it will be necessary not only for Oklahoma, but every other state and territory that expects to make an agricultural exhibit to get its plans formulated and people at work at the earliest possible moment.

Testimony similar to that given by J. W. Stevens of Audrain County, Mo., on this page, namely, that stock, contrary to expectation, is coming through the winter in extra good condition, and that the farmers have some feed to spare, is coming to us from various sections where last season's drought was very severe. Undoubtedly the unexpectedly good condition of the stock is largely due to the extra care that the short supply of feed made necessary, and probably the money value of good care has been impressed on the minds of hundreds as never before. Possibly this is one of those "blessings in disguise" that a number of our correspondents spoke of last summer and fall, when the drought was making the outlook very gloomy.

WHERE IS THE PHILANTHROPY?

Philanthropy that doubles the cost of a thing is rather expensive. Rather startling announcements have been made in some of the daily St. Louis papers that on the score of philanthropy trees were to be donated to the citizens of St. Louis to beautify their streets and yards. At the wind-up, however, of the most liberal offer, the statement was made that parties taking the trees would be charged the cost of digging, packing, freight, etc., which on trees of a certain size would amount to 25 cents each, and of a larger size at 35 cents each, and buyers are tumbling over each other to secure these philanthropically donated trees. The Board of Education is interested in securing the sale of them. This is only an evidence that the suckers are not all dead, even in the cities. If these would-be buyers would only make inquiries they could secure from persons here in St. Louis these same trees at much less price—nearly half the price they are paying for these donated trees. The Carolina poplar is the tree donated at 25 and 35 cents each, and trees of the same size can be bought here for \$15 to \$17.50 per 100. They would be fresh from the ground and much more sure to grow. This tree is grown from cuttings, is a very rapid grower and contracts to grow them at 8 to 10 cents each by the thousand of the same size would be gladly made by any of our nurserymen. This Cleveland philanthropy is very expensive. Some of our people may be suckers, but not all of them are.

RELIEF FOR THE SUFFERERS.

Responding to the needs of the people in South Missouri who are suffering so sorely from the effects of last season's prolonged drought, the people of St. Louis have contributed over \$4,000 for use in relieving the distress. Springfield, Mo., is also contributing liberally to the purpose, the funds raised in that city going largely to the relief of the people of Taney and Christian counties. Kansas City, too, is responding to the call for help and offers to care for the people of the drought district lying to the west of Taney. This includes more particularly Stone and a portion of Barry county. St. Louis is undertaking to give aid to the people of Osage, Douglas, Wright and Texas. Calls for help are coming from a section in Southeast Missouri, including the counties of Iron, Reynolds, Wayne and Carter. J. C. Evans, of Kansas City, well known by RURAL WORLD readers as the former President of the Missouri State Horticultural Society, president of the Olden Fruit Company, is the leading spirit in securing assistance from Kansas City. It was on his suggestion that the drought district was divided among Kansas City, Springfield and St. Louis. In a letter from him dated March 24, he writes: "I am glad your city has acted so nobly in this matter. You have been fully liberal in the division of the territory. The Commercial Club will meet tomorrow night, and the secretary assures me enough will be made up at once to relieve Barry and Stone counties. We will notify county court of each county to instruct the people to make application to them for relief. I am pleased with the shape the matter is in and can thank you and the RURAL WORLD for a good share of it."

A number of contributions in addition to that of Mrs. Thomas reported in last issue, have been received by the RURAL WORLD and turned over to Mr. Geo. H. Morgan, secretary of the Merchant's Exchange. Wes. L. Robertson, of the Gallatin (Mo.) Democrat, sent \$10; Ed. A. Harte, Knob Noster, gave ten bushels of seed corn; H. P. Brown, Atchison, Mo., sent \$5. The camp of Modern Woodmen of Sue City, Mo., are to contribute, and while we write the mail brings a letter from A. C. Loomis, of Revere, Mo., telling us that their Sunday school is making an effort to raise some money for the drought sufferers. All this has been contributed and much more will be needed to adequately relieve the needs of the worthy people of Southern Missouri.

GET THAT EXTRA BUSHEL PER ACRE

By Getting the Children Interested.

Minter & Crawley of Keokuk, Mo., offer three prizes of respectively \$20, \$10 and \$5 to public school pupils of legal school age who raise the best half-acre of corn in Charleston county this year, preparing, planting and cultivating the ground and gathering the crop themselves. Each contestant must prepare an essay not exceeding 1,000 words, explaining how he did his work and giving reasons for his methods. The largest yield is to count 25 points, the best methods 40 points and the best combined yield and delivery 25 points in the final award. Choice selections from each crop harvested for this contest must be preserved by the contestant for exhibition as part of Missouri's and Charleston county's exhibit at the St. Louis World's Fair in 1904.

Mrs. Minter & Crawley's plan is commendable and might well be adopted by other enterprising business men, who would get large returns from it while doing incalculable benefit to their communities. There is no disputing the fact that our farmers do not, in the great majority of cases, get as large yields of crops as their land is capable of producing. C. D. Lyon discussed this point in his article, "An Extra Bushel an Acre," in the RURAL WORLD of March

19, and showed that an increase of one bushel per acre from all the land in grain in this country would mean 154,500,000 bushels of grain. That this increase of one bushel per acre, and much more, can be secured by the adoption of better methods does not admit of a doubt; the only problem is how can these better methods be brought into use. We believe that the most effective means, although it may seem at first sight a slow process, is by getting the children on the farms interested in the matter, and the plan proposed by Minter & Crawley of Keokuk, Mo., is a good one to that end. We will keep watch of this effort with much interest.

THE SOLAR MOTOR ON THE FARM.

Some of our readers may have marveled a little at the story of the "sunshine at work," as given on page 8 of last week's RURAL WORLD, and questioned if the story was not somewhat Utopian. But science tells us—and science is very practical and matter-of-fact—that so powerful are the sun's rays where at their height, that on every square yard of the earth's surface there falls the equivalent of three horse-power. The sunshine on a four-acre lot at noon-day represents an energy equal to that of a steam engine of 120 horse-power. This is grown from cuttings, is a very rapid grower and contracts to grow them at 8 to 10 cents each by the thousand of the same size would be gladly made by any of our nurserymen. This Cleveland philanthropy is very expensive. Some of our people may be suckers, but not all of them are.

An interesting fact to us in connection with this solar motor is that a great problem is that the solar motor is being first put to practical use in the interest of agriculture by utilizing it on the arid plains of the great West to pump water to the surface. "Given a cheap power to pump water," it is said, "these barren plains will blossom like the rose."

CITY OR COUNTRY.

The Reverend Doctor W. W. Boyd, a prominent St. Louis divine, is quoted in a recent interview as saying that "judicious" lingers in small communities against the unknown. It is city life that broadens. The better educated, the more refined and the more experienced people become, the broader they are in their views. In other words, if the reverend doctor is correct, the people of country towns and rural communities are, in a general sense, less educated, less experienced and less refined, and are guided by prejudice. This unfavorable opinion of rural people compared with city people comes with bad grace from a man who has been as conspicuous as has Doctor Boyd in efforts to reduce some small measure some of the features of St. Louis city affairs that are a disgrace to civilization and a stench to heaven, namely, election frauds, legislative boudoir, the social evil, gambling, wide-open saloons on Sundays, etc.

We deny the correctness of Doctor Boyd's assertion that "it is city life that broadens." It is city life that broadens the city people are better educated and more refined than are those of the country. On the other hand, we assert that the general effect of city life with its daily grind in factory and sweat shop, at the dry-goods counter and at the desk for a messenger "ring," which is the lot of the great mass of the city people, the march of the comparatively few for dollars and the life of selfish indolence of the still smaller number who have acquired wealth, is dwarfing to the mental, moral and physical natures of the people. What would St. Louis be if every person born and reared to manhood and womanhood on the farm in small towns was eliminated from her population? If Doctor Boyd will look about him he will find that a very large proportion of those men and women who are recognized for their moral worth, sterling character and broad views of life brought these virtues from such communities in which he says prejudice lingers and which fail to broaden, educate and refine.

GROWING POST TIMBERS.

Every farm is the more valuable for having on it a belt of timber that will furnish material for fence posts and other timber needed on the farm. There are spots on nearly every farm that are waste places for general cropping purposes, which might most profitably be planted to forest trees. We are in such a hurry to get results for our labor that even young men lose sight of valuable investments because the money returns from them are not available this season or next year. For this very reason orchards are not always planted and intelligently cared for. Then, too, many farmers are planning to sell out and think the labor of preparing land and sowing it to seeds of various forest trees will bring them no direct returns. Yet a grove of

young, thrifty trees will give added value to a farm and enhance its value far more than will be received from poor crops grown on these waste places.

Young men, most especially, should give timber growing intelligent study. The thing that few are doing will in good time prove the valuable crop. Are there pieces of poor timber land in your community on which there is a good growth of young trees? That same property, if purchased and intelligently managed, may prove your most profitable investment.

We recently had a report of a farmer who 45 years ago began planting locust timber and put out ten acres of it. His neighbors thought him foolish, for the country was new and timber abundant. This farmer states that these groves have all been cut off for posts, and that more money had been received for the product of these ten acres than the farm would sell for, and it contained 100 acres of good land.

In some sections locust trees are much injured by borers, but this farmer thought a grove of one-fourth an acre to an acre could be profitably grown on most farms, risking the borer. It is stated by one entomologist, that the insect which deposits the eggs does so late in the season, and that soaping the trunks will keep the pest off. If the borer can be controlled growing locust timber for posts will be most profitable.

The testimony as to the durability of Osage orange timber for posts and other purposes makes this another desirable timber for the farmer to grow in small quantities. The scarcity of walnut trees, owing to their reckless destruction in years past, will make a farm with a promising grove of them very valuable. The testimony as to the durability of Osage orange timber for posts and other purposes makes this another desirable timber for the farmer to grow in small quantities. The scarcity of walnut trees, owing to their reckless destruction in years past, will make a farm with a promising grove of them very valuable.

The large use of oak in recent years for furniture and as finishing lumber in houses is decreasing the supply. The growing of forest trees for commercial purposes will prove a profitable resource of income, as well as the growing of post timbers for use on the farm.

GRAVEL FOR THE FARMYARD.

Editor RURAL WORLD: Few farmers seem to realize the value of the use of gravel for making good walks and roads about the farm as well as on the public highway. If there is a bad mud hole in the road the farmer hauls a load of stones, throws them in pell-mell, and when afterward he finds that either wet or dry that spot is a rough jolting piece of road, he utterly condemns the use of stones in any form for road making. If mud forms about the well and watering trough stones of the size of a peck measure and upward are thrown there, and then denounced because unsatisfactory, when the trouble is not with the stones, but the form in which they are put there. The same stone pounded down to the size of one's fist and smaller would have made the place ever after firm in all seasons. But it is more particularly of what is known as river gravel that I wish to speak.

The beds of nearly all our streams afford an abundant supply of smoothly rounded gravel, easily transportable and excellent for road making on any place where soft ground is to be contended with. This of all others is the season of the year when the barnyards, the chicken yards and even in many cases the space immediately around the kitchen door, are to be used as common expression "knee deep in mud." It is true that just at this time the mud is everywhere one must at most of necessity take the Arkansas citizen's view of the matter, but it is high time that the farmer of to-day put away that lackadaisical way of looking at things, and in seasons of good weather busy himself preparing for the rainy days. The farmer takes great pride in his new barn, and he has a thought to the drainage or the dressing of the ground so as to prevent a mudhole all about it.

The solution of all this matter may be found in the use of river gravel if accessible; if not, coal cinders or pounded stones may be used instead. First see to it that the ground about your buildings is so graded as to furnish good drainage, then spread over it a generous coating of gravel from two to four inches thick, being careful to leave an even surface. No ponding is needed and no sharp corners, such as you have with cinders and crushed stones, are to be contended with. This will wear down to a smooth, hard surface, which will be cleaner and more attractive during a rain than at any other time. If you cannot have a large surface of such gravel contrive to have a small space in front of your barn where you may drive your team and unblock from your vehicle with some comfort have a walk from the house to the barn so that you will not be to the necessity of putting on a pair of rubber boots every time you pass between these places. It is far superior to boards for all walks about the farm house.

Such a coating before the henhouse is an excellent thing, affording the chickens the dry ground which they very much need and the supply of fine gravel which is indispensable to them. Though they may answer the same purpose, coal cinders are not nearly as clean as the gravel. It is not necessary always to go to some stream, for good gravel may be found in the gravel pits I have known were away from any stream.

The question of clean, well-regulated farm premises is well worth our attention from the standpoint of both comfort and health, and by no means the least of the drudgery factors of the farm is this of the mud about dooryard and barnyard. The gravel offered for inexpensive and efficient remedy, for it may be hauled at any time of the year when the farmer is least busy, such time usually being contemporaneous with good solid roads. The farm life is just what we make it, and it is this attention to details which makes it enjoyable and profitable for mind and body.

Caldwell Co., Mo.
We are somewhat late in publishing the foregoing excellent article, owing to the great demand upon our space, but if field work must now absorb all time and attention, the suggestions contained in the article should not be forgotten, but carried out when the opportunity does occur. Acting on such suggestions as our correspondent makes will be of incalculable value to farmers and their families in making farm life pleasant.—Editor.

GROWING OSAGE ORANGE POSTS.

Editor RURAL WORLD: In answer to W. H. Parks' inquiry regarding Osage orange posts, my observation is that they will last from 15 to 40 years, owing to the fact that they are so hard and set. They will last much longer in dry than in wet ground. In rich land that has been cultivated, the trees will grow large enough in six to ten years for fence posts.

What timber is best to plant for fence posts? In a question often asked. The best that I know is black locust, and Osage orange. They will outlast four oak posts. The black locust grows much faster, and can be used about two years younger than the Osage orange, and often makes two lengths of posts.

Both can be planted close and thinned when large enough for posts. The black locust will sprout from the stump, make a perpetual forest for both posts and a wind break. I have seen them after being cut grow sprouts from the stump six to eight feet in one summer. The sprouts should be thinned to one or two. Plant in rows about 12 feet apart, and in rows six to eight feet apart. Between the rows, two rows of potatoes or cane can be planted the first two years.

Black walnut can also be profitably grown for both posts and timber. It will also sprout from the stump and will grow very rapidly. The wood is soft and unfit for posts, and will soon rot. Taking into consideration the destruction of the forests and the increasing demand for timber, we can see the need and value of timber in the near future, especially for posts and building timber. Fence posts can be made to last more than twice as long by dipping them in a mixture of boiled linseed oil and kerosene, the mixture having the consistency of paint. For medium-sized posts the cost will not exceed one cent per post. The post should be sharpened ready for use. A cheap trough can be made in which to put the mixture when treating the posts.

Vermon Co., Mo.
Mr. Faith's method, with varying modifications, for preserving fence posts has been frequently advised, and considerable doubt has been expressed as to its utility. What have been the experiences and observation of our readers on that point? Any information bearing on this production and preservation of fence posts is valuable.—Editor.

WHEN TO FIGURE.

Editor RURAL WORLD: The result of ex-Governor Hoard's investigation of the dairy business in Iowa emphasizes still more your idea that the lead pencil is one of the most necessary, if not the most useful, tools on the farm. The Darwinian theory that man is a descendant of the monkey has a good deal to recommend it for imitation. Because somebody has made a success of dairying we jump at the conclusion that we can do so, too. Another has made money feeding cattle for the markets, and others plugging into it without a moment's thought or preparation. Some make money raising corn and feeding hogs. A great many do, but many more could do much better at something else, for which their land and surroundings are better adapted. Originality and the application of the fundamental rules of arithmetic would raise many a farmer from the slough of despondency.

Many years ago one of my neighbors took several carloads of cattle to the Chicago market, and on his return, being asked how he came out on his venture, replied that he did not make enough money to buy lead pencils sufficient to figure up his losses. He fed his figuring at the wrong end of the transaction.

The man who undertakes to make money raising corn for the markets where the general average is about 20 bushels per acre, as it is in this part of Missouri, will undoubtedly make a failure. I put the average yield of corn per acre at 20 bushels because by the liberal use of lead pencils one must come to that conclusion. There are many fields and patches that yield from 50 bushels to 75 bushels, and even 100 bushels per acre, but a great many more fall below the 20 bushel mark. There are many farmers who keep stock of all kinds all their lives, and yet do not know what it costs to keep them, or how many tons of hay or shocks of fodder they will eat during the summer. Some will keep cows that barely raise a calf and are bolder at his expense more than the half of the

year. It costs all the way from \$8 to \$25, and this year much more to keep a cow 12 months, and with the percentage of loss and failure on other lines, one is just about doing business for fun when keeping cows to raise calves only. It is not every one who knows that the second year of a hen's life is the only profitable one of her existence. After that she is practically a dead beat. Ring the bell, somebody.

THAT FALL-SOWN BARLEY.

Editor RURAL WORLD: I can answer Mr. C. D. Lyon's query regarding my fall-sown barley. It is a complete success and has come from its winter quarters as green and bright as it went in. I will now give a reason for the experiment. There was no feed in sight for spring work and in an effort to provide something I sowed the barley and with it I sowed three pounds of sandvetch; then for four the barley might fall I put in a half gallon of wheat and rye each, and now I have all four in as fine prospect for early feed as any one could ask. I anticipate the barley will be about matured by the middle of May, and the vetch, wheat and rye matured enough to make a rich green ration for work teams. I have all my spring sown barley in the ground, and it is coming up. If I am successful this year I will have seed to sell this fall. Last year's trial yielded me 53 bushels per acre, while oats were a complete failure on just the same kind of soil.

Next others try, and don't keep in the rut that have been worn for 300 years. Nature is kind to us if we will only reach our length for her favors. One swallow does not make a spring, neither does one failure spell defeat in anything.

NOTES FROM AN OHIO FARM.

Editor RURAL WORLD: On the 8th day of March snow covered the ground everywhere, in some places drifts were 12 feet deep. It went off rapidly under the warm sun, and on the 13th I found the first spring flower in the timber where we were sawing wood. It was a pretty little plant, known as "turkey penny" or "pepper and salt."

I must have braced too much on those boys sawing; we cut down a gray ash three feet at the butt, and long enough to make 44 cuts of 16-inch wood. The tree had been struck by lightning many years ago, and was of no value for anything but stove wood, as it was scarred and crooked. The first half day they cut off five blocks, the second six, making short two cords of split wood, as some blocks were a little hollow. No matter how hard the boys worked or how carefully I dressed the saw they could not "make a record" on the tree. It was all in the way the log laid, as it was on a hillside; had it lain up, where the logs laid, we cut wood in January they could have done a half more.

We have one tobacco plant bed 10x28 feet made, one week earlier than last season, but it is the only one I know of. OAT SMUT.—Three years ago my uncle told me that he sowed four acres of oats, three acres with new seed and one acre with two-year-old seed; in the plot where the new seed was used there was considerable smut, in that from the old seed none.

I sowed a bushel of three-year-old oats last year and did not see a single smutted stalk in the plot. I think the grain should experiment along this line for it is very probable that the smut spores do not retain their vitality more than one season.

At the sales I mentioned, Mr. Editor, cattle sold at \$10 to \$15, horses, \$20 to \$100, and the "backwater" was 10 feet deep in the road, not the "wood," as you printed it.

I never knew until I read the paper on "catching rabbits," by H. N. of Cass County, Mo., that the three-pointed "trawl hooks" were ever used on trot lines for bait fishing. I used to fish some and used a 30-foot line with heavy sugar hooks and two-foot "staggers." The largest fish I ever caught was a 30-pound buffalo, and "no fish stories" did you say, Mr. Editor? All right.

WHEAT went into the winter in very poor condition; sowing was late from fear of frost, and it was very dry all through October and November. Snow and ice covered all the fields for about seven weeks, and when it went off the plants were small and yellow. The past two weeks, although one was of heavily drifting snows, have been favorable and fields where not a trace of green was to be seen a few weeks ago are now promising to make a fair crop. One thing is certain, we need not fear Hessian fly the coming year.

SEEDS.—I had Edward E. Evans, West Branch, Michigan, advertise seed of beardless barley, cowpeas, etc., in the RURAL WORLD. He is a grower, and our readers should be aware of the right kind of treatment at his hands. All those who heard me speak at institutes last winter will remember that I spoke of the necessity of getting seed cowpeas of a variety that will ripen their seeds where they are grown. Prof. H. J. Waters is a great admirer of the New Era pea on account of its earliness. I have not grown it, but will have a row in my experiment plot this year. Warren's Extra Early is the earliest I have grown; ripe pods in 52 days from May planting. In regard to anything pertaining to the farm we have a perfect right to the ad-

vice of those in charge of our experiment stations, and we are welcome to it, even if these men do work as hard or harder than we on the farm do. "All experience was experiment a few years ago." C. D. LYON.

SOUTHERN OHIO.

AUDRAIN COUNTY, MO., NOTES.

Editor RURAL WORLD: Spring appears to be opening out early, and the farmers, nothing daunted by last year's experience, are out in force, and renewed vigor sowing oats and preparing the soil for other crops. There will be a large acreage sown, also quite a lot of flax.

Wheat, while not as vigorous as in some springs, is in fine shape, and all it needs is a favorable season from now on to make a good crop. Blue grass, that so many thought dead, is coming on fast, and all it needs is a little favoring this spring by not turning on too soon to make as good pasture as usual.

Who can tell us about Brom Grass? Will some one that has tried it in Missouri give us their experience? At a sale here a few days since a bunch of one-year-old black steers brought \$31.50 per head; grade Shorthorns, \$22; cows, \$25 to \$50. How do these prices compare with those of last fall?

As usual the unexpected has happened. Instead of stock starving, or nearly so, they are coming out in extra good shape, and the farmers have some feed to spare. March 22. J. W. STEVENS.

ALFALFA IN KANSAS.

Editor RURAL WORLD: I note with much interest the growing popularity of the alfalfa plant in all sections west of the Mississippi. Having seen much of it in Kansas and Colorado, I can vouch for its usefulness, both as a feed for stock and as a soil renovator. The trouble with most farmers in this section is that they are loath to turn a good field of alfalfa under, as it is such a valuable crop when once a good stand is obtained. In our county the past season yields of ten and twelve bushels of seed per acre were not uncommon, and with seed at \$5 per bushel, right in the granary, the possibilities of alfalfa growing are self-evident.

I have been partial to alfalfa as a pasture plant for about ten years. It is quite a dourous reeler when planted on a loose prairie soil, so that the roots can penetrate the earth to some depth. It has been said that alfalfa will find water if there is any to be found, and I believe the saying is true. In Colorado the land on which the plant is grown is somewhat sandy, with little surface moisture, but in some portions of the state it grows readily without irrigation and is one of the chief sources of food supply for dairy and other cattle during the severe winter months in the high altitudes.

It should be remembered that corn and other grains, except wheat, can be grown in Eastern Colorado in very limited quantities, as the season is too short for them to mature properly. One can easily realize what a boon the alfalfa crop is to farmers living there. And the half has never been told of what it has done for Kansas in just the past year. Many would have had to sacrifice both hogs and cattle had not the alfalfa crop come to the rescue. Farmers in this vicinity are planning to sow a large acreage this year and profit by the lessons of the worst crop year in the history of this section. AGRICULTURIST.

CHASE CO., KAN.

QUAILS NOT ALL GONE.

Editor RURAL WORLD: I learn from reports of the loss of quail from cold and starvation. The ground was covered with a coating of ice and snow for several weeks, which prevented the quail from finding seeds or grain. This loss is much to be regretted, as quail are of great value to the farmers. I am glad to report that on our (Ten Brook) game preserve, we have at least 150 quails alive to-day. They had access to a pen of corn, and also to shock corn in several places on the farm. The quail and redbirds got away with several bushels of corn, which they were very welcome to. Bluebirds have been with us all winter, also robins, by the hundreds. Redbirds are very numerous here. I frequently see as many as 25 at one time about the corn crib. Our farm is on the north line of Jefferson County, Mo. J. W. T.

SUNFLOWERS AS A CROP.

An Atchison County, Mo., reader of the RURAL WORLD wants to know if sunflowers would be a paying crop. He has some ground on which wild sunflowers make a very rank growth. It is a deep black loam, too wet usually for corn and does not overflood.

Such soil would without doubt make a heavy growth of the cultivated sunflower and yield a heavy crop of seed, and the value of the seed as food for stock, particularly poultry, is so fully appreciated that we should think it would find ready sale. We will be glad to have readers who have grown sunflowers as a crop advise others.

A wise and learned man has said that the hardest words to pronounce in the English language are, "I have made a mistake."

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SMITHSONIAN DEPOSIT

The Dairy

PREPARE FOR SHORT PASTURES.

Editor RURAL WORLD: My attendance at the Kansas dairy meeting the week in March closed my winter's work in conventions and institutes in three states.

Speaking from a dairyman's standpoint, I found the question of greatest interest was feeds for mid-summer or periods of short pastures and droughts. The figures I presented to illustrate my talks and show the value of succulent feeds during dry, hot months fully substantiated my claims of the great value of ensilage as a summer feed. The figures shown were the total daily milk yields of our herds of Jersey cows, and at every meeting much surprise was shown at the remarkable yield and its uniformity from day to day and month to month. The yield for 3 1/2 months with no grass whatever, and temperature above 100 degrees most of the time, did not vary 30 pounds from the first of the period to the last.

I would like to impress on every dairyman, and stock breeder as well, the importance of arranging for a continuous supply of green feeds during the coming summer. There are no feeds in the dry form that will give as good results as soil crops, and the former will cost much more than the latter. To those who have bought my recent publication I call their attention to the chapter on soil crops and method of culture, and to those who have not a copy of my book I will say, provide soil crops in sufficient quantities to give all stock a liberal feed every day while the pastures are short.

The silo is the cheapest source of this succulent feed, but few have sufficient silo capacity for such supply. We of Cedar Hill will be pretty short on silage this summer and we will have a variety of soil crops to take its place. First we will sow all barn lots and corners in Dwarf Essex rape, such patches paid us over 75 per acre last year. We will also sow eight acres of this rape in the field to mow for young stock and hogs. We will sow eight acres of Canada peas and oats for silaging milk cows from the last of June until July 15; eight acres of alfalfa, to be fed green in part from July 10 to 20. At this time our crop of Country Gentlemen and evergreen sweet corn will be ready, and then the 10 acres of sorghum, making us a continuous supply of green feed from the last days of June up to ensilage cutting time. This will insure us a liberal ration of milk and a good growth in young stock at a low cost. If we did not have some 70 acres of rough land in blue grass that cannot be tilled we would not have any permanent pasture at all; it is the poorest paying land on the farm to-day.

I am pleased to see so much interest shown in silos and ensilage, both in Missouri and Kansas, and their adoption in these states will revolutionize both stock raising and dairying. I see no reason why every farm in the West should not carry double the stock it is carrying at present and of much better quality.

Monmouth, Ill. "BUFF JERSEY."

AT THE ST. LOUIS WORLD'S FAIR.

A Plan for the Proposed Test of Dairy Breeds.

Editor RURAL WORLD: Every owner of pure-bred dairy cows should take up this subject, especially if he owns a valuable cow that may be sought after for this test. He should endeavor to have the plan such as he is willing to submit his cow to. If he fails to do so he should not withhold his cow, however objectionable to him the plan may be.

I was a member of the committee for securing cows for the Chicago World's Fair test. Our experience was fruitful of lessons. We visited 38 states, traveled thousands of miles and put in seven weeks of hard work. Many of the leading breeders of that day directly or indirectly refused our cow, they gave us the reason that they considered it ought not to be submitted to conditions that endangered their future usefulness.

I quote from an address of President Horst at the annual meeting of the Holstein-Friesian Association in 1895. "Many of the breeders living in that region absolutely, and so did many of the western breeders, to furnish any cows, or else they had none that were coming in at the right time. We had in charge a campaign which it was our duty to see prosecuted to a successful termination, and we found that we had gone to the Chicago Exposition with interior animals and cows that were not fairly representative, or else stay away. We also found that the expense of taking these cows there and of hiring suitable superintendents was very much larger than we had anticipated, and that our treasury was hardly in the condition to make it prudent and conservative for us to commit this association to such a large expense."

Every one will agree with me that such experiences ought not be repeated. The remedy is in securing a plan on which our breeders will generally unite.

To this end there should be free discussion of the subject. I know of no better place for it than in the columns of agricultural press. The breeder who is not true to use his influence for the best possible plan should not be excused for that reason in withholding his cows from the test. "Silence is consent" is an adage in common use. I venture to open such a discussion and hope that others will follow.

The best plan for the test, in my opinion, would be one modeled after the form of the Ohio State plan. This plan has been successfully used for several years under the auspices of the Ohio State Board of Agriculture. Its leading features are:

1. It is a very good plan for those who are not located so they can dispose of the cream or butter to advantage, and can buy the extra calves required, but nothing short of a pure-bred registered cow to be sold for breeding purposes will return a profit on butter fat eaten equal to what the creamery man will pay for it. The farm cream separator and one calf will get more profit out of the milk than will two calves and pay for the extra labor besides.

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I Will Cure You of RHEUMATISM No Pay Until You Know It

After 2000 experiments I have learned how to cure rheumatism. Not to turn joints into flesh again; that is impossible. But I can cure the disease always, at any stage, and forever.

I ask no money. Simply write me a postal card and I will send you an order on your nearest druggist for six bottles of Dr. Shoop's Rheumatic Cure, for every druggist keeps it. Use it for a month, and if it does what I claim, pay your druggist \$5.00 for it. If it doesn't I will pay him myself.

I have no samples. Any medicine that can affect rheumatism but a few doses must be drugged to the verge of danger. I use no such drugs. It is folly to take them. You must get the disease out of the blood.

My remedy does that, even in the most difficult, obstinate cases. I will not impose such a claim on you. I know it and I take the risk. I have cured tens of thousands of cases in this way and my records show that 30 out of 40 who get those six bottles pay, and pay gladly. I have learned that people in general are honest with a physician who cures them. That is all I ask. If I fail I don't expect a penny from you.

Simply write me a postal card or letter. Let me send you an order for the medicine. Take it for a month, for it won't harm you anyway. If it cures pay \$5.00. I leave that entirely to you. I will address a book that tells how to do it. Address Dr. Shoop, Box 535, Racine, Wis.

My cures are, testing of each individual cow at the home of her owner, by representatives of the State Experiment Station, and finally the exhibition of all the cows together for a fixed period at the State Fair.

There would have to be widely different details at the St. Louis Exposition. I will suggest a few details tentatively.

1. The period over which the test should be extended ought to be a long one—probably ten months.

2. That at least three tests of two weeks each should be made at intervals during such a period. I will suggest that the first should be commenced some time between 14 and 28 days after freshening, the second between 114 and 128 days after, and the third between 224 and 238 days after.

3. All the tests be made under the supervision of two representatives of an experiment station who should watch the cows day and night, note the care, weigh the food, etc.; that the results should be subject to confirmation by retesting in every case that the authorities of the Exposition requested.

4. That prizes be offered for net profit, for value of total solids, for value of butter fat, etc.

5. That the number of prizes be at least one hundred, but that no one breed be awarded more than twenty-five.

6. That at least the completion of the period allotted for testing all the winning cows be exhibited on the grounds of the Exposition, perhaps two weeks, to be seen by all and critically studied by those who desire to study their conformation.

The average cost of testing a cow thus would exceed \$150. At this rate 25 would cost \$3,750. An appropriation of \$5,000 would cover this and leave a balance of \$1,250 for duplicating the prizes of the Exposition.

S. HOXIE, Yorkville, N. Y., March 14, 1902.

N. E. MISSOURI DAIRY MEETINGS.

Editor RURAL WORLD: As promised, I will try and give you a short account of the dairy meetings which have been held in this district the past week by Prof. C. H. Eckles, professor of dairy husbandry in the Missouri Agricultural College.

The first meeting was held at Salsbury on the 12th inst., and was well attended, although the weather was very wet and stormy. Two sessions were held, and the subjects "How to Make the Best of the Cow," and "Selecting and Feeding the Dairy Herd," were well received.

On the 13th a meeting was held at Shelby, two sessions being held there. Great interest was taken in the work, as a number of farmers intend going into dairying. "Fertilizing Value of Crops" and "The Handling of Milk and Cream for Shipment" were the subjects discussed.

On the 14th an afternoon session was held at Excelsior, where there is a growing dairy industry. A general outline of the subject of dairying was given, with discussion afterward, and a large number of questions were asked.

A very successful session was held at Axtell, and such was the interest taken in the meetings that they broke up late in the night. "The Profit of Dairying," followed by a general discussion, was the program.

The meeting at Macon on the 15th was held in the afternoon. A fair number were present and all were interested. Mr. Rudolph Miller, who owns the Macon Creamery, and the Salsbury, Axtell and Kellogg Skimming Stations, offered to take all the cream and milk which was brought in good condition and to pay the best market price. The writer gave short addresses on the "Bikim Milk Calf" and "The Last Half-Cent and the Last Half-Cent." I believe that this district will come out in dairying and with some encouragement will develop very fast.

ROBT. H. PETTERIDGE, St. Louis, Mo., March 16.

A GOOD PLAN AND A BETTER ONE.

A few Waldo County farmers dispose of their milk by a somewhat unusual method, says a Maine paper. "A calf is kept on the cow until sold, whether it be at four weeks or three months old, and a young calf is bought to take his place. The calves grow rapidly and are always in good condition. When they are kept until quite large the milk is supplemented by a grain ration. The calves thus do the work of milking and caring for the milk, reducing the farm labor materially. Only enough cows are milked in the regular way to supply the family with milk and butter."

This is a very good plan for those who are not located so they can dispose of the cream or butter to advantage, and can buy the extra calves required, but nothing short of a pure-bred registered cow to be sold for breeding purposes will return a profit on butter fat eaten equal to what the creamery man will pay for it. The farm cream separator and one calf will get more profit out of the milk than will two calves and pay for the extra labor besides.

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HORTICULTURAL TALKS.

I took five bottles of 'Favorite Prescription.' Two of 'Golden Medical Discovery,' and also two vials of Dr. Pierce's Pleasant Pellets. I can highly recommend these medicines to all who suffer as I did. I never had better health than I now enjoy, and it is all owing to Dr. Pierce's medicines."

Dr. Pierce's Common Sense Medical Adviser, in paper covers, is sent *free* on receipt of 21 one-cent stamps to pay expense of mailing *only*. Address Dr. R. V. Pierce, Buffalo, N. Y.

Stop the Cough
and Works off the Cold
Laxative Bromo Quinine Tablets cure
cold in one day. No cure, no pay. Price
25 cents.

Our readers will do well to write Wm Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

POTATO

This Marvelous Extra Early Potato originated by
HARRY N. HAMMOND SEED CO. Ltd
Box 66, DAY CITY, NEBR.

Largest growers of seed potatoes in America. 30 best varieties. Northern Grown always best. Bright pink enormous yielders, highest quality. Lowest prices for lb., bu., or carload. Elegant snap-page Margin Seed Catalogue FREE. Write for it today.

Read **"THE CORN BELT,"** a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to

THE CORN BELT,
209 Adams Street, Chicago.

**Blue Vitriol, Carbonate of
Copper, Paris Green, London
Purple, Oil Soap,
For Spraying Purposes for Sale**

WHITELAW BROS., ST. LOUIS.

[illegible]

PATENT GROOVED
Tire Wheels
 For Farm Wagons
 Any Size to 24 inch wheels.
 Made only by the
HAVANA METAL WHEEL CO.
 Havana, Ill.
 We are the largest
 makers of steel wheels and low
 price tires in the U. S.
 Write for prices.

Live Stock

DATE CLAIMS FOR LIVE STOCK SALES.

April 1, 1902—M. Sooter, Lockwood, Mo., Shorthorns.
 April 8—Breeders' Combination Sale, Herefords, Kansas City.
 May 7—Colin Cameron, Herefords, Kansas City.
 June 18—C. E. McLean, Danville, Ind., at Indianapolis. Double Standard Polled Durhams.
 The "National Hereford Exchange" under management of T. F. Rotham, as follows:
 April 29-30, 1902—Kansas City.
 May 27-29, 1902—Omaha.
 June 24-26, 1902—Chicago.
ABERDEEN ANGUS CATTLE.
 April 10-11—Combination sale, W. C. McGavock, mgr., Kansas City.
 June 10-11—Combination sale, W. C. McGavock, mgr., Chicago.
NATIONAL SHORTHORN SHOWS AND SALES.
 May 8—At Columbia, Mo., Boone County Shorthorn Breeders' Association.
 May 14—At Kansas City, Mo.; W. T. and E. H. Clay, Plattburg, Mo.
 Oct. 22, 1902—Geo. W. Jessup, Rockville, Ind.; Charles F. Mills, Clerk, Springfield, Ill.
 Dec. 1, 1902—Combination sale, Berkshires, Manager A. J. Lovejoy, Roscoe, Ill.; Clerk, Charles F. Mills, Springfield, Ill.

GRADES OF PURE BREDS.

Editor RURAL WORLD: In W. W. Wright of Monroe City, has closely followed my writings he knows that I am not a stockman, but a crop grower, only keeping a few head of cattle, hogs and horses.
 Not every farmer can make a success with high-bred stock, and I am sure that if we look all over the country we many find many more who have failed to make money out of fancy stock than out of good grades. I think that the most ardent admirer of pure-bred cattle would hesitate before advising a man to sell "five good grade cows at \$40 or \$50 each and invest the money in one pure-bred and registered cow." If Mr. Wright has five good grade cows he is getting close up to more money for his calves than \$25 each, if he breeds to a pure-bred bull and retains his best heifer calves as breeders; then, as our editor says, the milk is an additional source of profit. "Squeamishness" about skim milk calves is all right, but when it goes into a man's pocketbook to feed butter fat to calves instead of giving fat in a cheaper form he will soon be found laying aside some of his old ideas and feeding something cheaper than butter at even 15 cents per pound.
 Twenty-six years ago a man bought 250 acres of land six miles from me. He also bought a small herd of registered beef cattle, and infused new blood as it was required; yet he did not succeed because he was unable to dispose of his cattle at the prices he had a sale a few weeks ago and I noted that his cattle were no better than mine, and I make no pretense as a breeder. If I were in debt I would not think of assuming more debt in order to get pure-bred cattle, especially if I had no certainty of selling my produce at paying prices.
 If I owned a good stock farm and was out of debt I would sell all grades excepting the very best and buy as good stock as I could get. There is a great satisfaction in knowing that one owns as good stock as can be found.
 Ohio.
 C. D. LYON.

GEORGE BOTHWELL, Nettleton, Mo., that eminently successful breeder of Shorthorn cattle, will sell at Chicago, April 14, 40 head of Scotch and Scotch topped cattle. Most of the offering will be of his own breeding, but there will be seven animals of his own importation in the lot. It includes Mr. Bothwell's show herd of 1901, all bred by himself and which, as our readers know, held its own with the leading herds of the country. The yearling bull, bull calf and get of one sire of this herd were practically invincible. These show animals are in the pink of condition and properly cared for will make trouble for other exhibitors this fall wherever they are shown. The remainder of this offering comprises as good cattle as Mr. Bothwell's herd contains, and will make valuable additions to any herd of Shorthorns. They are all regular breeders and for the most part are sired by or are the get of the Scotch bulls, imported Nonpareil Victor, imported Blackwatch, Grand Victor or the Bates bull, Winsome Duke 11th. On the dams' side the animals are all of the best Scotch or Bates breeding. In fact, it is an offering of the highest merit as to breeding and individual excellence such as will delight lovers of the Shorthorn breed. Send to Mr. Bothwell at once for a catalog and then arrange to attend the sale.

THE STAKED PLAINS' HERD SALE of Bates Shorthorn cattle, at Kansas City, Mo., on March 20, was only fairly attended. The cattle had been strictly ranch raised and were not fat, and the result was the buyers got the best end of the deal. Forty-one head, all cows and heifers, brought \$3.35, averaging over \$8.55.

Abortion Prevented
 Saved a Calf—Saved a Foal.
Hood
Farm
Abortion
Cure
 I lost four calves and had three more cows that were showing signs of abortion. One lost her calf the year before at a little over 8 months. She was about 7 months along and her udder was badly swollen. I gave her Hood Farm Abortion Cure as directed for three weeks. The swelling all left her and two months later she dropped the best calf on the farm. I had a mare that showed signs of abortion. I gave her this remedy and she came around all right and foaled a living colt. R. C. THOMPSON, Downs, Iowa.
 Two sizes—\$1 and \$2.50. Large four times dollar size. 25c additional to any railroad express point in the U. S. Send for pamphlet on Abortion and Failure to Breed. Mention this paper. Address
 C. L. HOOD CO., Lowell, Mass.

JUDGING BEEF CATTLE.

Columbia, Mo., March 21.—The annual stock-judging contest among the short-course students of the Missouri State Agricultural College has been completed and the results announced to-day. The short course is offered by the Missouri Agricultural College every winter for the benefit of young farmers who cannot spare the time to take a complete course in agriculture. Instruction is given in crop-growing, stock-breeding, stock-judging, stock feeding, dairying, gardening, fruit-growing, veterinary practice, carpentry, blacksmithing, bookkeeping and the elements of chemistry, geology and botany applied to agriculture. The State Board of Agriculture offered two prizes, supplemented with a third prize offered by Dean Waters to the students making the highest grade in judging beef cattle and writing the best essay on "The Most Profitable Type of Beef Steers." F. B. Mumford, an expert judge of beef steers, scored twenty-eight animals, consisting of eight thoroughbred bulls and cows and twenty grade steers of cattle. The members of the class then scored each animal and wrote an essay describing the best beef type and giving reasons therefor.

The judges were Hon. Alex. Maitland, of Richmond, Mo.; George B. Ellis, secretary of the Board of Agriculture, and H. J. Waters, Dean of the Agricultural College. The final grade was made up by taking 60 per cent of the grade on judging and 40 per cent of the grade on essay. The first prize was awarded to G. Wilson Hamilton, Fulton, Mo.; second to Walter L. Schubert, Rockport, Mo.; third to E. A. Loomis, Meadville, Mo.

The judges had a difficult task to award the prizes, as there was a high standard of excellence in both the scoring and essays. Some of the essays will be printed in the April bulletin of the Board of Agriculture, which will be devoted to the subject of "beef production."

THE COMING HEREFORD SALE

At Kansas City, April 8 and 9.

The announcement that there will on April 8 and 9 be another large combination sale of Herefords at Kansas City should be of especial interest to a large number of our readers. One hundred and fifty head will be sold and the following are the contributors: H. D. Adkisson, Napton, Mo.; W. S. Allen, Raymore, Mo.; George B. Baker, Maryville, Mo.; T. F. Burwell, Colorado City, Col.; C. G. Comstock & Son, Albany, Mo.; B. H. Downing, Sturgeon, Mo.; E. A. Eagle & Son, Rockport, Kan.; Benton Gabbert & Son, Dearborn, Mo.; James A. Gibson, Odessa, Mo.; P. L. Johnson, Parkville, Mo.; S. B. Johnson, Parkville, Mo.; Jones Bros., Comiskey, Kan.; Gudgell & Simpson, Independence, Mo.; Estate of G. W. Novinger, Pegley, Mo.; Scott & March, Belton, Mo.; C. A. Stannard, Emporia, Kan.; S. L. Starnes, Hunt, Mo.; H. A. Schwandt, Laclede, Kan.; W. E. Spears, Richmond, Kan.; H. B. Watts & Son, Fayette, Mo.; J. W. Wampler & Son, Brailton, Kan.; R. T. Thornton, Kansas City, Mo.; D. E. McArthur, Billingsville, Mo.; L. B. Chapell, Mount Leonard, Mo.
 As will be noted, a large proportion of these are breeders who have not heretofore made public offerings outside of the Association's combination sales, and in each instance these breeders are consigning a few head of the very best young stuff in their herds. It is needless to add that the drafts from the larger and better-known herds will be representative ones, and the entire lot of cattle will be of a class that should find a host of appreciative purchasers. The sale was not planned with the idea of making a record breaking average, and the breeder, farmer or ranchman who will attend this sale can undoubtedly purchase some well bred, useful breeding stock at very moderate prices. A large number of the females included are due to calves shortly, and the bulls are strong, lusty fellows that are ready for immediate service.
 Catalogues will be sent upon request and you should not delay writing for one. Address Gudgell & Simpson, Independence, Mo.

We have space in this issue for mention of only a portion of the offerings, but will speak of others in our next issue. GUDGELL & SIMPSON, Independence, Mo., will sell six cracking good heifers in the Hereford breeders' combination sale at Kansas City, April 8 and 9. Two of them are by Andrew, two by Milant, the sire of some of the famous animals in their show herd, and the other two are by the great Beau Brummel. These heifers are all two-year-olds or just turning two, and have all been bred to some of the Gudgell & Simpson herd bulls. This sale is full of good ones. Don't overlook it.

W. E. SPEARS, Richmond, Kan., is selling three bulls in the Hereford sale at Kansas City April 8 and 9. Concerning them he says: "Highland Lad, lot 19, is by Dial 32 7453 by Free Lance, used by Mr. Funkhouser for years in his herd. His dam is Rose 5402, a granddaughter of Don Carlos. He is a fine marked, dark red bull of good form and bone, stands on straight legs and is good enough to head a herd. Lord Rose, lot 20, and Dandy, lot 15, are the other two, and are all good ones, as smooth as Herefords ever grow."

H. D. ADKISSON, Napton, Mo., writes: "In regard to the four bulls I have in the sale at Kansas City April 8 and 9 will say that they are all good strong bulls and will be sold in good thrifty condition. They are all sired by the Cornish & Patton bred bull Prince Oaff 9929, he by General Gomez and out of their favorite old breeding cow Mab 1196, who is also the dam of Mr. Harris' great head bull Benjamin Wilson. Sir Browning, lot 70, is perhaps my best one, but they are all the square, bulky kind that every one in the business, and I think these bulls good enough for any kind of company."

JONES BROS., Comiskey, Kan., says: "Our consignment to the Hereford sale April 8 and 9 at Kansas City will consist of four strong, useful bulls. Renown 10792 is sired by Sir Benjamin 71236, a 2,600-pound son of Wild Tom, out of a Donaldson cow. Don Pedro 10229, also by Sir Benjamin, is out of the Kansas Lad cow, Armour Naid 12th 7008, the dam of Armour Rose. Lord Vernon 10224 is of the low-down, blocky type. President 12629 has for his sire Lincoln 24 7427, who was first in the two-year-old class at the American Royal in 1899, and his dam, Alice 2d 2702, by Java 6405, was also a winner at the same show."

J. W. WAMPLER & SON, Brailton, Kan., are selling two bulls and two females in the Hereford sale at Kansas City April 8 and 9. One of their plums is After the Ball, lot 1, a 25-month-old heifer by Leonard Grove, and she will be safe in calf at time of sale to Sunny Slope Tom

5th by Wild Tom. Sunny Slope 10m 5th is an extra good one himself, weighing 2,000 pounds at three years of age. He has a son in the sale, Sunny Slope Blossom, a yearling bull of the kind that everybody needs. The other heifer is in lot 2, Gustie's Model, by imported Salsbury, a large, growthy heifer calved December 1, 1900.

HANDLING THE BULL.

In handling a bull, the most important precaution is to keep your eye on him. People will generally do this with a strange bull, but when they get acquainted with him, and he acts so very gentle, they are apt to regard him as safe. We often hear of people that are proud of their tame bulls, bulls that the children can handle perfectly harmless and yet, if we examine the cases where furious bulls gore their masters, of which every newspaper might give an account, in nine cases out of ten, they are tame bulls. In fact, bulls are like shot guns. It is always the tame bull or unloaded shot gun, that does the most damage, says the Southwestern Stockman.

On account of a bull's disposition he should be ringed before he is a year old; in farming countries it is folly not to have rings in the bulls' noses as the rings are the best bull conquerors known in modern agriculture. A good strong staff (a pitch fork handle with an iron hook having long tongue and set screw for closing the loop in the shank hook), is the proper accompaniment for the ring. We often see men leading a bull by a rope in the ring, but how can they keep the bull from charging them? A bull should always be treated in such a manner that he cannot doubt who is the master. But he is an animal with feeling which responds to kindness. If given an apple core, a turnip, or any other dainty frequently from the hand and thus taught to respect you, the ease of handling will amply repay you for the trouble.

If it pays to curdy a \$25 horse, will not the same truth apply to your \$125 bull? Besides the generally acknowledged benefit of currying, the constant or daily handling of the bull tames him considerably. With "vicious" bulls, a ring in their ring, dragging on the ground, has been a very successful help in managing them.

CATTLE NOTES.

W. G. SWINNEY, proprietor of the Clover Leaf Herd of Herefords at Bois d'Arc, Greene Co., Mo., informs us that his cattle are coming through the winter in fine shape. He has a few lusty young bulls that can be bought at very reasonable prices.

THOSE INTERESTED in high-class Aberdeen Angus cattle will do well to correspond with Mr. J. P. Vissering, Melville, Ill. He is an old established herd, and you can obtain from him both bulls and heifers. He will also give you correct freight rates on the stock you buy.

A STOCK FARM FOR SALE.—The attention of our readers who are stock raisers, is called to the advertisement in this paper, headed "Stock Ranch." This is an exceptional opportunity to go into the stock business. From its location and other advantages it certainly is worthy of thorough investigation. The name of Col. Terrey is a guarantee of itself. Look it up.

M. SOOTER's sale of Shorthorn cattle will be held next Tuesday, April 1, at his farm, seven miles south of Lockwood, Mo., in Dade county. Col. Sparks has the sale in charge. It is the second sale of pure-bred cattle in Southwest Missouri, where the buyer has the privilege of fixing the price. Col. Sparks gave several persons great bargains at the first sale and probably will at this one.

DEHORN THE CALVES.—All cattle produced on farms and all those that are likely to be finished up in feed lots should be dehorned while calves. Dehorned steers are worth, everything else being equal, \$2 a head more than the horned animals. They feed better; feed more evenly and economically. They ship better, and for the reason that their flesh is not bruised they sell better in the market.

COL. W. R. NELSON'S dispersion sale of Shorthorn cattle at Kansas City, Mo., March 19, was well attended and the sale as a whole was a good one. The imported cattle, no doubt, lost the Colonel money; the top bull of the sale was imported Bapton Arrow 15230, which brought \$750. S. B. Shelby, Westport, Mo., being the buyer. Imported Lavender Lily and cow calf, by imported Baron Arrow, brought \$1,800, going to D. R. Hanna, Ravenna, Ohio. Fifty-six head brought \$15,665, averaging \$280.44.

A BIG CATTLE DEAL.—Fort Worth, Tex., March 13.—The Texas Cattle Co. of a former governor of the state of Chihuahua, Mexico, is here to-day closing one of the largest single firm deals ever made in this country. The sale will include 25,000 head of cattle. The terms are private. To transport this large number of cattle it will require forty trains of fifteen cars each. The approximate freight bill on the stock to the various destinations will be \$36,000, the group rate per car being \$175.77. Young Terras left here to-night for Kansas City, where the transaction will be consummated.

The Terras ranch includes 5,000,000 acres, of which there are at the present time 250,000 cattle. Seventy-five thousand calves were branded this year. During the cattle convention just closed some head like 80,000 head of cattle changed hands, at an average price of \$22.50 per head. Yearlings brought on an average \$27.

A NOTABLE SHORTHORN SALE.—Omaha, Neb., March 12.—T. J. Ryan & Son, of Lewin, Iowa, to-day disposed of 47 head of pure bred Shorthorn cattle at the South Omaha stock yards for a trifle less than \$200. The sale included 40 head of cows and heifers and seven bulls, and prices ran from \$145 to \$215. This latter figure was for a 16-year-old cow, 62d Duchess of Gloster, belonging to the Cruikshank Duchess of Gloster family, recognized as the best tribe of Shorthorn cattle in existence. Additional interest centered in this cow, because of its having been bred to imported Scotland Crown, 14562, the bull imported by Prof. Curless, of the Iowa State Agricultural college. The next highest price, \$125, was paid by C. L. Marsden, of Mason City, Iowa, for the imported Scotch cow, Zoe 6th. C. A. Sunders, of Manila, Iowa, paid \$100 for the beautiful yearling roan heifer, 70th Duchess of Gloster. There was perhaps as great a representative body of breeders of Shorthorn cattle present at this sale as has ever been together. The cattle were distributed over the states of Iowa, Nebraska, Missouri, Wyoming and Washington. The sellers

realized an average of over \$400 per head for the entire offering, which breaks the record of any sale of Shorthorn cattle held in this city.

G. H. AUGUSTUS, Paris, Ill., will sell a draft of 66 Shorthorn cattle—41 females and 24 bulls—at Kansas City, Mo., on April 15. These cattle are either of Scotch or Scotch topped American families. Some of the very best of Bates breeding are represented in this offering, with Scotch tops. The offering as a whole is a good one and of good breeding. There are some most excellent bulls in this offering, the best of which is the grand three-year-old bull, Sampson, sired by Capt. C. E. Leonard's great show and breeding bull Lavender Viscount, in Sampson Lavender Viscount has a son that any breeder may feel proud to own, as he is a good one from start to finish. There is a roan yearling that will do to keep an eye on, and several others, red in color, that promise great things. If you want some good Shorthorns that are well bred attend this sale and pick up some of the bargains. Don't forget the date, April 15, and send to Mr. Augustus, Paris, Ill., for a catalog.



We have been advertising for a long time the Keystone Dehorning Knife, manufactured by M. T. Phillips, of Pomeroy, Pa., and have received from him a view showing the dehorner in actual operation, which we are glad to present herewith. Little is needed besides the knife itself, and the work is quickly and easily done by one operator and a helper. This is the knife which took highest award at World's Fair in Chicago, and which cuts from four sides without bruising or tearing. It's the human dehorner. Write to the manufacturer for circulars.

Special care should always be used to avoid a cross where the same defects exist on both sides.



V. D. DIERKER, Breeder of REGISTERED SHORT-HORNS, POLAND CHINA HOGS, PLYMOUTH ROCK POULTRY, BARRED WHITE AND BUFF. Your trade solicited. Eggs \$2 per setting. St. Charles, Mo.

Blackwater Shorthorns. F. M. Marshall, Pros. BLACKWATER, Cooper Co., Mo. Herd headed by the Oriskany Bull, Orange Hero 15108 by Goddy. Females are of pure Scotch as pure Bates, with individual merit the standard. Young stock of both sex for sale.

Registered Shorthorn Cattle AND POLAND-CHINA HOGS, Bred and For Sale by H. A. BARBER, WINDSOR, MO.

TEBO LAWN HERD OF SHORTHORNS OWNED BY G. M. CASEY, SHAWNEE MOUND, HENRY COUNTY, MO. Railway Station, Clinton, Mo.

Lines of Breeding—"The Casey Mixture," Cruikshanks and other Scotch as well, Bates and Renick Rose of Sharnon. Herd Bulls—Imp. Calypso 155022, bred by Wm. Duthie; Imp. Mythe Victor 14080, bred by W. S. Mary; Admiral Swoley 153872, bred by Col. C. E. Leonard; Victor South 162797, bred by J. R. Crawford & Son; Victor Abbot, bred by T. J. Wallace & Son and Scotch Lavender, bred by Hanna & Co. Address all correspondence to E. B. MITCHELL, MGR., CLINTON, MO., RURAL ROUTE NO. 1.

ST. LOUIS NATIONAL STOCK YARDS. THE LIVE STOCK MARKET OF ST. LOUIS. Located at East St. Louis, directly opposite the city of St. Louis. Shippers should see that their stock is billed directly to the National - Stock - Yards.

C. G. KNOX, V.-Pres. C. T. JONES, Gen. Mgr. L. W. KRAKE, Asst. Gen. Mgr.

Herd Bull for Sale.

On April 10 will sell to highest bidder my herd bull Orange Baron 2nd No. 146,886 roan, calved Nov. 10, 1897, a good individual and also a good breeder, as his calves will show. Got by Victoria Baron 105559 out of Orange Princess, she by 11th Kirklevington Duke 75,858, out of Orange Queen by Lord Alcomb 82919, out of imported Orange Blossom 31st by the great Roan Gauntlet (3,5284), etc.

Twenty-five good bulls, some pure Scotch, will be sold at same time and place. For particulars and catalogues address

W. W. POLLOCK, MEXICO, MO.

"Sunny Slope Herefords." TWO HUNDRED HEAD FOR SALE, consisting of 40 good cows 3 years old or over, 10 5-year-old heifers bred, 60 yearling heifers and 100 bulls from 8 months to two years old. I will make VERY LOW prices on any of the above cattle. Write or come to see me before buying. C. A. STANNARD, Emporia, Kan.

AUCTIONEERS.

R. W. MITCHELL, LIVE STOCK AUCTIONEER, GENTLEMAN, Mo. I sell pure bred and mixed cattle, hogs, by lots of patrons say I know how to sell them. Write to terms and dates.

W. D. ROSS, OTTERTONVILLE, MO. Live Stock Auctioneer, Your Patronage Solicited. Terms reasonable.

H. W. KERR, BREEDER OF RED POLLED CATTLE. Good young bulls for sale. Carlinville, Ill.

Shorthorn Cattle, Berkshire Hogs, Cotswold and Shropshire Sheep. Bulls ready for service. Some choice boars and 15 bucks for sale at reasonable prices. The pure Scotch bulls Violeta Prince 145,647 and Golden Symphony 151,656 in service. JOHN MORRIS, Chillicothe, Mo.

Shorthorn Bulls. A choice lot for sale. Good breeding quality and color. Write for prices. W. H. FULKERSON & SONS, JERSEVILLE, ILL.

CLOVER LEAF FARM HEREFORDS. FROM the best imported and native strains. Farm 3 miles from station near Vidalia, Mo. Correspondence solicited. 15 young bulls, 6 to 18 months, for sale. W. G. SWINNEY, Box 17, Arz, Mo.; Greene Co., Mo. Memphis, Mo.

Shorthorn Cattle, Berkshire Hogs, Angus Goats, Light Brahms and Golden Seabright Chickens. Stock and eggs for sale. Call on or address J. J. LITTLELL, Sturgeon, Mo.

Highland Park Herd. Pol. Durham Cattle, Duroc-Jersey Hogs. Young stock of both kinds for sale. Inspection of the herd invited. Address G. W. JOHNSON, Lexington, Mo.

J. R. NOBLE, Breeder of Registered Hereford Cattle, 1515 heads the herd. Young stock for sale. OTTERTONVILLE, ILL.

ENGLISH Red Polled Cattle. Pure blooded and extra fine stock. \$27 Your orders solicited. L. E. HARTWIG, Dorchester, Greene Co., Mo.

THE name of SAM W. COX has appeared to the readers of Colman's Rural World as a name that any live-stock breeder in Shorthorn Cattle, 15th Duke of Odsavie 18291 in use. Up-to-date Poland China Hogs. Eggs from choice Plymouth Rocks. Write him again if you want anything at South Greenfield, Mo., on E. C. & P. S. branch of Price System.

ABERDEEN ANGUS. Let me give you prices and list of registered Angus Bulls that will sire prize-winners. J. R. VIBBERING, R. R. Melville, Ill.

CEDAR VIEW AND GROVE HILL SHORTHORNS. Gay Laddie 119,393 at head of herd. Young stock for sale. Call or write POWELL BROS., Lee's Summit, Mo.

HEREFORDS. 20 Registered Hereford Bulls, from 8 to 20 months old; 10 nice Yearling Heifers, fine as silk; 10 2-year-old Heifers, bred to choice bulls. Herd contains 135 head. Call on or address N. E. MOSHER & SON, Salisbury, Mo.

GUARANTEED DEHORNER. Farmers! Do your own dehorning and save money. Costs only one cent a head. Used by all stock raisers. Send for a bottle, price \$1.00. We say express. Agents wanted everywhere. Easy to sell. All stock raisers buy it. Write for particulars. GUARANTEED DEHORNER.

AUXVASSE HERD. Shorthorn Bulls, Southdown Hogs and Berkshire Hogs. Choice breeding. Individual merit. Stock sold worth the money. Call on or address C. A. McCue, Auxvasse, Mo.

Breeder of REGISTERED SHORT-HORNS, POLAND CHINA HOGS, PLYMOUTH ROCK POULTRY, BARRED WHITE AND BUFF. Your trade solicited. Eggs \$2 per setting. St. Charles, Mo.

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Twenty-five good bulls, some pure Scotch, will be sold at same time and place. For particulars and catalogues address

W. W. POLLOCK, MEXICO, MO.

"Sunny Slope Herefords." TWO HUNDRED HEAD FOR SALE, consisting of 40 good cows 3 years old or over, 10 5-year-old heifers bred, 60 yearling heifers and 100 bulls from 8 months to two years old. I will make VERY LOW prices on any of the above cattle. Write or come to see me before buying. C. A. STANNARD, Emporia, Kan.

APRIL COMBINATION SALE OF

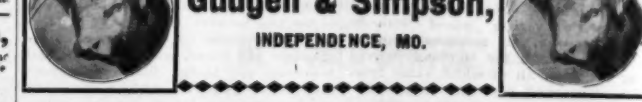
HEREFORDS

150 head of well-bred Registered Herefords of desirable ages to be sold at public auction at Kansas City, Mo., April 8 and 9, 1902.

A Sale That Should Interest Every Buyer.

The cattle are contributed by C. G. Comstock & Son, Albany, Mo.; Benton Gabbert & Son, Dearborn, Mo.; Gudgell & Simpson, Independence, Mo.; Scott & March, Belton, Mo.; C. A. Stannard, Emporia, Kans., and 20 other representative Hereford breeders.

Catalogues sent upon request by Gudgell & Simpson, INDEPENDENCE, MO.



Geo. Bothwell's CHAMPION SHORTHORNS AT AUCTION AT UNION STOCK YARDS, CHICAGO, APRIL 14.

43 HEAD The pick of all the young things in my entire herd, consisting of thirty-six females and seven bulls; eighteen of the females Scotch or of Scottish extraction, and the remainder Scotch-Topped Rose of Sharnon, Duchesses of Goodness, White Roses and Matildas.

THE CHAMPION BULL CALF OF 1900, THE CHAMPION BULL CALF OF 1901, THE FIRST-PRIZE HEIFER CALF At the Chicago International will be included.

In other words MY ENTIRE SHOW HERD OF 1900-1901 go under the hammer to the highest bidder on April 14.

Address for catalogue and other particulars GEORGE BOTHWELL, NETTLETON, MISSOURI. Auctioneers: MESSRS. WOODS, JONES, EDMONSON and SPARKS.

65--SHORTHORN CATTLE--65 TO SELL AT Kansas City, Mo., Tuesday, April 15, 1902.

The Property of Geo. H. Augustus, Paris, Ill., CONSISTING OF 41 Females and 24 Bulls, Scotch and Scotch Topped.

Many of the good American Standard Families being represented. The entire list being composed of GOOD, USEFUL, PRACTICAL CATTLE.

Special attention is called to the fine three-year-old SHOW BULL, SAMPSON, a son of THE GREAT LAVENDER VISCOUNT, the two years' champion and winner of the Armour trophy, worth \$400.00.

This will be the bargain sale for good, practical cattle. For catalogues address G. H. AUGUSTUS, Paris, Ill.

AUCTIONEERS: COL. J. W. SPARKS, COL. R. E. EDMONSON, COL. H. O. BOYER, COL. R. L. HARRIMAN.

SECOND ANNUAL SALE. At Lockwood, Mo., April 1st.

16 Heifers==8 to 30 months of age==18 Bulls. [31 of Them by the Great Show Bull,

WINSOME DUKE 12th, 12162

RUPTURE CURED

Quickly and Permanently
I have practiced over 15 years here, curing ruptures of all kinds. No pain, no expense. No pay unless cured. Booklet on rupture sent on request. J. A. JAMES, M.D., 111 N. 7th St., St. Louis, Mo.

I CURE CANCER

Positively and permanently, at home without knife or burning. Thousands are cured every year. Do not despair, but write at once for treatment and address. J. A. JAMES, M.D., 111 N. 7th St., St. Louis, Mo.

ARTICHOKEES

Will yield well in dry seasons. Wonderful crop. Free circular how to plant, cultivate, etc. J. E. HAYNES, Ames, Ill.

POLAND-CHINAS.

WALNUT Valley Farm, Poland-China, Black U. S. Chief Perfection and Tenthredine at mod. prices. Brant, W. Wallen, Monett, Mo.

VIVIAN & ALEXANDER, FULTON, MO.

Brothers of the best strains of Poland-China hogs. Superior Jersey cattle and Plymouth Rock chicks. Free stock for sale at all times.

FOR SALE.

Pure Red Poland-China Sows and Gilts and Shropshire Down Eggs, etc. J. W. HOLMES, Ames, Mo.

DUROC-JERSEYS.

Big 2 HURDS Duroc-Jersey and Chester White hogs raised. Write for list of prices. J. E. HAYNES, Ames, Ill.

40-DUROC-JERSEYS-40

Of Red Sows and Gilts of Best Strains. G. G. RICHARDSON, Sturgeon, Mo.

NEVER ROOT HOGS

Tanner and Ear Marker. The most adjustable steel blades. Makes root marks on hogs. No change of blades. No loss of time. W. L. SHORT, JR., 111 N. 7th St., St. Louis, Mo.

NO HUMBURG

8 Perfect Tons in One. Humane Sows V. Stock Marker. Made of all-steel. No change of blades. No loss of time. W. L. SHORT, JR., 111 N. 7th St., St. Louis, Mo.

BRED SOWS FOR SALE

Five Sows of 1901 farrow, sired by Black U. S. Perfection 58509 a, full brother in blood to "Keep On." The sweepstakes winner at Chicago 1901. Bred to Ideal Tenthredine 56974, winner of 1st in aged class Illinois State Fair 1901, and due to farrow in April and May. Prices \$25.00, \$30.00, and \$35.00 each. All good color and size.

JNO. HEDGES & SON, PANA, ILLINOIS.

160-LB. PIGS Perfect 1 Cows, Chief Perfection 1st & 2nd Black Chief, Rival S. Dams of equal breeding. L. A. SPENCER, BREAUX, Ill.

"Follow the Flag."

WABASH Banner Route TO THE Great Gateways

Kansas City, Omaha, Chicago, Toledo, Detroit and Buffalo

St. Louis Ticket Office: EIGHTH AND OLIVE STS.

CANKER SORES IN YOUNG PIGS.

A Wisconsin breeder uses the following remedy for canker sores in young pigs. He dips the entire head in a solution of the following: Potassium permanganate, one ounce, dissolved in a half gallon of water. This solution should be applied three times at intervals of two and three days. Before using the solution, remove as far as possible all dirt from the snout of the pig, or a larger amount of the solution will have to be used to get good results. The sow's udder should also be washed with this solution three times. Disinfection of the farrowing pens with hot lime water should also be performed. As his observation was that litters farrowed in the same pens at different times have been infected with this disease.

Another breeder has used senecioleum with success as a wash and disinfectant. If there are other remedies that have been used with success, we should be glad to have them from our readers.—Exchange.

The Pig Pen

ARTICHOKEES FOR PIGS.

Much has been written on the subject of the food value of artichokes, but very few careful experiments have been made to determine just what proportion of rations for farm animals can be profitably made up of these tubers. To throw light on this point, the Oregon Station fed six thrifty Berkshire pigs—which had been running on wheat stubble and which weighed from 117 to 125 pounds at the beginning of the experiment—from October 12 to December 11 on artichokes, supplemented by a small ration of equal parts of chopped wheat and oats.

An effort was made at the outset to compel the pigs to subsist on a diet of artichokes alone; but in the absence of grain there was very little gain, and the pigs were not contented. They were vigorous in their demands for something more substantial.

The artichokes were grown near the pens, so that the pigs could have access to them when ever they desired. The tubers were left in the ground for the pigs to root out as they were needed.

A portion of the plot was measured and the artichokes dug to determine the yield, which was found to be 740 bushels per acre.

During the experiment the six pigs consumed the artichokes grown on one-eighth acre and made a total gain in live weight of 344 pounds, or an average daily gain per pig of 0.81 pound. The pigs gained during the period 7.5 pounds of grain, or at the rate of 3.1 pounds of gain for each pound of gain in live weight. In other experiments it has been found that it requires about five pounds mixed grain for each pound of gain in live weight.

The artichokes resulted in a saving of nearly two pounds of grain for each pound of gain in live weight. The pigs were healthy and vigorous throughout the experiment.

The artichokes used in this experiment were planted the last of April, on ground plowed deeply and prepared as for planting of potatoes. The tubers were planted in furrows, which were three feet apart. The seed was dropped 18 inches apart in the row and covered with a hoe. The plants were cultivated a few times, but after the tops were two feet high no further cultivation was necessary.

The tops grew very high before the end of the season. The pigs left only a few tubers in the ground.—Bulletin, U. S. Dept. Agr.

Mr. George A. Arnold of Hayden, Neb., breeder of Duroc-Jersey hogs and grower of artichokes, comments on the foregoing thus: "The artichokes were worth at the rate of \$40 per acre right where they grew as a pork producer. The experiment only proves what I have often said from an experience of 12 years in raising artichokes for my own hogs, that they were worth to me from \$25 to \$40 per acre right where they were grown as hog feed. Besides, one's hogs are insured against disease while they are on an artichoke and grain diet."

Another thing about artichokes is that they are one of the greatest drouth resisting roots that grows. When potatoes and corn fall from drouth I can count on my artichokes making a good crop any how. While corn and potatoes were about a failure here last year my eight-acre field of artichokes made a yield of 350 to 400 bushels per acre. Therefore I consider them the hog raiser's stand-by in time of drouth."

Note Mr. Arnold's artichoke advertisement on page 3.

FEED HOGS COTTONSEED MEAL CAUTIOUSLY.

A series of experiments was made at the Oklahoma station to determine the value of cottonseed meal for hogs. Of a lot of four weanling pigs fed a grain ration consisting of one-fifth cottonseed meal and kept in a small pen, two died after being fed this mixture for 40 days. The other two lived and thrived and were fattened on the above mixture without changing in 126 days. During that time they made an average daily gain per pig of 1.07 pounds, and for each pound of gain ate 3.48 pounds of grain that had a value of 2.24 cents.

Of a second lot of four weanling pigs kept in a small pen and fed a grain ration of one-fifth cottonseed meal and four-fifths corn meal for four weeks, then corn meal for two weeks, alternating in this manner during 18 weeks, one died at the end of five weeks after being fed for four weeks on the mixture and one week on pure corn meal, the other three lived and thrived and were fattened at the end of 126 days. During that time the average daily gain per pig was 1.06 pounds and for each pound of gain they ate 3.48 pounds of grain that had a value of 2.14 cents.

A third lot of four weanling pigs was kept in a small pen and fed a grain ration consisting of one-third corn meal and two-thirds wheat middlings, for 126 days, and all were well fattened at the end of this time. The average daily gain per pig was 1.15 pounds, and for each pound of gain they ate 3.7 pounds of grain that had a value of 2.87 cents.

A fourth lot of four weanling pigs fed corn meal for 84 days and kept in a small pen, made very poor gains and a change of feed was necessary to fatten them. In the 84 days they made an average daily gain per pig of one-half pound, and for each pound of gain they ate 5.6 pounds of grain that had a value of 2.96 cents. When changed to a grain mixture of one-fifth cottonseed meal and four-fifths corn meal the gains were increased and in 42 days following the change, they made an average daily gain per pig of .92 of a pound, and for each pound of gain they ate 3.42 pounds of grain that had a value of 1.96 cents. For the total feeding period of 126 days, the average daily gain per pig was .62 of a pound, and for each pound of gain they ate 4.7 pounds of grain that had a value of 2.47 cents.

In this experiment when weanling pigs were kept in small pens and fed a grain ration containing one-fifth cottonseed meal and four-fifths corn meal, one-fourth to one-half of the number died, after being fed the ration five to seven weeks; those living and fed the above ration, continuously and alternating with corn meal, were fattened with most excellent results.

The amount of grain required to produce a pound of gain was practically the same with pigs getting cottonseed meal as it was with pigs getting middlings, but was much less than that required by pigs getting corn meal. The pigs getting one-fifth cottonseed meal and four-fifths

The Shepherd

A MOVABLE SHEEP PEN.

Editor RURAL WORLD: Some months ago in riding across the country on the cars I saw a very convenient movable pen for grazing ewes with lambs or young calves, etc., and now is a good time to make some such thing.

Make a pen 16 feet square, then put in two cross partitions, run them into four pens eight feet square. Now take two scantlings 18 feet long and fashion a spindle on each end of each scantling. Fit the spindles to ordinary cultivator wheels, spike the scantlings to the corner posts on sides opposite to each other, at such distance from the ground that when the wheels are in place on the spindles the pen will be raised from the ground so they may be pushed from place to place with ease. AL. TAIR.

Cass Co., Mo.

A MODEL SHEEP BARN.

Our sheep barn was built in March, 1898, writes Frank Leslie in the "Live Stock Journal." The trees and logs were cut and hauled to a saw mill on an adjoining farm near by, during the winter, the writer of these lines doing most of this work himself. The shingles for the building had been made during the previous spring. The number required was something over 5,000. They were cut 2 1/2 inches long, and in width ranged from 5 to 6 inches. They were made from thrifty red oak trees.

This barn is 30 by 26 feet and 18 feet to the "square" (eaves). The posts (there are 16 of them) are 8 by 8 inches and 17 feet long, they rest on the stone pillars a foot thick, and these pillars are provided with stone-structure. The joist bearers, ties and plates, are made of 2 by 8-inch plank, the braces 4 by 4 inches and the nail ties (for weather boarding) are 3 by 4 inches. There is not a tenon or mortise in the entire frame, and with the exception of these posts, there is no piece of timber longer than 12 feet. The lower story is 5 feet in the clear, the joist bearers being out of the way of a tall man's hat. There is a 10-foot driveway through the center, the long way, which makes it convenient to haul out the manure.

The barn is provided with track (made of 4 by 4 inch scantlings) carriers and forks for taking in hay. This is done from the outside through a door in the gable end. The mow now holds 20 or 25 tons. There are no ties or beams through the center of the mow, for a fellow to climb over, crawl under or strike head against while moving back the hay. It is what is known in modern barn building as the "open center."

Racks are stationed around the wall (lower story) from which hay is fed. The grain troughs and fodder racks are outside and at each end. Usually two barks of sheep are housed in this barn, partitions being formed by means of portable gates.

The barn is well ventilated, the sliding having been put on green and leaving cracks in shrinking or seasoning, which I consider an advantage. There is ample room for the accommodation of 100 sheep, and after four years of use I can think of nothing I would care to change were I building again.

The main thing in putting up a building is to get something that will bear the test of time and that you will not become disappointed with.

The cost of this barn including value of timber and my own labor was about \$25. All the material of the structure, excepting nails and hinges, was the product of the farm. I consider this one of the best sheep barns in this locality.

BERKSHIRE BREEDERS' MEETING.

The annual meeting of the stockholders of the American Berkshire Association was held in the office of the secretary, Col. Chas. F. Mills, last month. It was the twenty-seventh annual meeting and the past year has been one of the most successful of this excellent record association. N. H. Gentry, Secy., Mo., the well-known Berkshire breeder, is president of the association. In his opening address he dwelt upon the unprecedented success attending the business of the association the past year. He also paid a high compliment to the Berkshire breed, as he is a thorough Berkshire man from head to foot. D. W. Smith, the treasurer, showed annual receipts of over \$5,000, and the balance after paying all expense of the past year was \$1,400. The prospects for the coming year are for the continued growth of business.

The officers elected were: N. H. Gentry, Secy., Mo., president. Geo. S. Frine, Oskaloosa, Ia., vice president. Charles F. Mills, Springfield, Ill., secretary. D. W. Smith, Springfield, Ill., treasurer. Thomas Rees, Springfield, Ill., auditor.

CANKER SORES IN YOUNG PIGS.

This disease invariably appears in young pigs from the time of birth to a few weeks old. If not attended to promptly it either stunts their growth permanently or they waste away and die. The symptoms are as follows: Sore mouth, swelling of the jaws, white, sometimes light brown scabs, which later show deep cracks. The scabs and cracks are found on the snout, extending over the head and even to the body and limbs. In some cases an ulcer will form at the end of the snout and eat away part of the nose. In other cases the ears may be affected and drop off. There is dullness, loss of power in the hind limbs, a tendency to walk on the fetlocks, disinclination to move. The pigs usually stand with their backs humped up. They either refuse to suckle entirely or else do so in a half-hearted manner. If made to walk and move they will squeal as if in pain, writes H. C. Duke in the "N. E. Homestead."

The young pig must first be attended to by dipping the entire head in one of the following solutions: Potassium permanganate, one ounce, dissolved in one-half gallon of water; or creoline or chloronaphthol, one ounce to one-half gallon of water. These solutions should be applied three times at intervals of two or three days. Before using the solution remove as far as possible all dirt from the snout of the pig, or a larger amount of the solution will have to be used to get good results. The sow's udder should also be washed with one of these solutions two or three times. Disinfection of the farrowing pens with hot lime water should also be performed. As it has been noted that litters farrowed in the same pen at different times have been affected with this disease.

A large digestive capacity is of prime importance in meat-producing animals, and in this particular the hog stands pre-eminent among our farm stock.

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WASHED AND UNWASHED WOOL.

Our local wool dealer told me, not long ago, that he could pay me 25 cents a pound for my delaine wool, washed, but if it was unwashed he could pay but 16 cents. So it seems that we are in the same boat we always have been. We cannot quit washing our sheep if we expect to get what the wool is worth. Take for instance a fleece that will weigh seven pounds washed. At 25 cents it will bring \$1.75, and the same fleece unwashed, to bring the same money, would have to weigh over 10 1/2 pounds. To figure it the other way, take an unwashed fleece that weighs nine pounds. The custom is to deduct one-third. This would leave the fleece merchantable at six pounds, and sometimes a number of washed fleeces go into the unmerchantable pile, and we know that all fleeces will wash away the same, writes A. S. Foreman in the "Ohio Farmer."

These estimates are all right but the error is in the reduction and prices. We are sure that a fleece that weighs 10 1/2 pounds unwashed cannot be brook-washed down to 7 pounds, nor one that weighs 9, down to 6. The proprietor of the "Ohio Farmer" sheep experiment farm made, by careful experiment on delaine wool, a shrinkage of only one-fifth. That would be, in price 20 and 25 cents, or a reduction of a five-pound fleece to four, merchantable.

I will be glad to see the day when this matter can be adjusted so that a fleece washed or unwashed will bring the same money, for the same number of pounds of wool, washed or unwashed. If the manufacturer knew the wool practiced in washing wool they would be glad to change the custom. I have seen sheep washed in very cold water (you could not wash anything out of a fleece in a tub of cold water) and sold for washed wool. The loss to the manufacturers in this practice amounts to a good many dollars. If the manufacturer knew the wool practiced in washing wool they would be glad to change the custom. I have seen sheep washed in very cold water (you could not wash anything out of a fleece in a tub of cold water) and sold for washed wool. The loss to the manufacturers in this practice amounts to a good many dollars. If the manufacturer knew the wool practiced in washing wool they would be glad to change the custom. 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